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Awareness About Sickle Cell Anemia, its Causes and Impact on Health in University-Girls-Hostel Residents: A Questionnaire-Based Study

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ABSTRACT

A survey was conducted to provide awareness about sickle cell anemia, reasons and its effect on health. A research was done to provide awareness about sickle cell anemia. Total 80 students of Bahauddin Zakariya University Multan Girls hostel Khadija hall were involved in that study in which they were asked about sickle cell anemia disease type and its diagnose and how it can be controlled either by surgery or medicines or no need of its treatment and how it spreads and family friends history of this disease A survey was done to conduct information about sickle cell anemia disease type it's diagnose, family history, its prevention and its control by medicines.MS word was used for statistical analysis. Present study estimated that majority of students are aware of the fact that it is a fungal disease rather than viral the percentage of students who said that it is a genetically transmitted are 41.4% and it is not an inherited disease. 50% of students are affected by this disease.

Keywords: *Red blood cell, Oxygen, Heredity disease, Blood flow, Blockage.*

1. Introduction

Sickle cell anemia is a genetically inherited form of anemia. This is a condition in which patient cannot produce adequate amount of normal RBS that are carried out oxygen in complete body. In normal circumstances red blood cells are usually round and flexible which can transport easily in whole body. But in this disease red blood cell become adhesive and converted into sickle or a crescent moon like form. And as a result their shape become irregular and they can't further move through blood vessels so it ultimately block blood flow and oxygen transfer in other body parts. However this disease has no cure in some patients and their pain can be reduced by use of some pain killers which reduce the pain. Signs and symptoms vary from person to person and they involve fallowing conditions i.e. patient suffer from anemia because of oxygen deficiency and as a result patient feels tired and fatigue, crises which is aperiodic pain is major symptom of sickle cell anemia which occur due to blockage of blood flow to abdomen , chest and in any bone of body. The hands and feet's of patient become swallow due to blockage in blood flow. The patient becomes vulnerable to infections because the damage of spleen, reduction in growth occurred due to this disease in early childhood and puberty.

Eyes also damaged in this disease because blood blockages occur in vessels supplying oxygen to eyes. Fever is another sign of this infection which is related to high infection risks, the skin of patient turns into yellow color along with nail beds. the eyes become yellow or formation of yellow tints, sickle cell anemia is caused due to mutation in gene which provide red color to red blood cell oxygen to all parts of body is transfer by red blood cell. Including lungs and as a result of this disease the red blood cells become sticky and solid which leads to abnormal hemoglobin production. This disease is genetically transferred from parents to offspring's due to autosomal recessive inheritance. For the development of this disease both parents should have defective form of this disease. this disease leads to several complications which include stroke in which blood supply is blocked to brain areas as a result your child may lose consciousness and weakness it can be fatal. organs can be effected by this disease

because they don't get enough oxygen kidney liver and spleen can be damaged from it and are fatal, sickle cell anemia blocks oxygen supply to eyes as a result vision is effected and in severe case blindness can be occurred. Legs ulcers soreness and open pores are formed in this disease. Gallstones are produced by this disease because breakdown of these red blood cells formed stones in body. Blood test is done to diagnose this disease in infants as a result detective hemoglobin presence is detected.

Treatment includes uses of some antibiotics and pain killers however its vaccine is also available in which a patient become immune to this disease.by fallowing these simple steps the sickle cell anemia can be controlled up to some extent they include fallowing a lifestyle in which dairy supplements and healthy eating involved. Regulate exercising can reduce its risk factors and use of folic acid supplements should be included in daily life. Avoid extreme temperature for patients having cell anemia. Healthy life style and use of balance diet can reduce its risk factors. Awareness campaigns are important area of research in health sciences [1]-[2].

The main purpose of the study was to provide awareness about sickle cell anemia, its causes and impact on health in university-girls-hostel residents.

2. Methodology

A survey was done to provide public awareness about sickle cell anemia. Total 80 students of Bahauddin Zakariya University Multan Girls hostel Khadija hall were involved in that study in which they were asked about sickle cell anemia disease type and its diagnose and how it can be controlled either by surgery or medicines or no need of its treatment and how it spreads and family friends history of this disease.

Study Design

A survey was done to conduct information about sickle cell anemia disease type it's diagnose, family history, its prevention and its control by medicines.

Statistical Analysis

Statistical analysis was done by SPSS v20.

3. Results

Percentage of students having different feedback is given in table 1, 2, 3 and 4 respectively. 58.57% were in favor of this disease as a viral but 41.1% have opposite opinion and 64% of students claimed it a bacterial disease where 61.42% thought that it is a fungal disease but 38.57% have oppose it. 56% students claimed it as a genetically transmitted disease where 38% were not in that favor.

47.14% students said that sickle cell anemia is a metabolic disease but 52.85% students said that it is not so. Majority of students claimed it can n transferred by blood transfusion and less students have opposite opinion. 51.42% 0f students said that it is a genetically transmitted disease where 48.57% students oppose it. The percentage of students who have opinion that sickle cell anemia can be treated by medicines is 58.57% but 41.42% students oppose it. Less number of students has opinion that sickle cell anemia can be treated by surgery but many students have opposite opinion. 48.855 students claimed that sickle cell anemia doesn't need any treatment but 57.145 students were not in favor of this opinion.

Table 1. Study for awareness about sickle cell anemia etiology

Sickle cell anemia	Agree	Disagree
1. Viral infection	58.57%	41.4%
2. Bacterial infection	61.42%	38.57%
3. Fungal disease	55.71%	44.2%
4. Genetic disease	57.14%	42.85%
5. Metabolic disease	47.14%	52.85%

Table 2. Study for evaluation of views about transfer of Sickle cell anemia

Ever have Sickle cell anemia	Agree	Disagree
1. Yourself	50%	50%
2. Your family member	51.42%	48.57%
3. Your relative	54.28%	45.7%
4. Your neighbor	47.14%	52.85%
5. Your friend	55.71%	44.28%

Table 3. Study for evaluation of views about Sickle cell anemia transfer

Sickle cell anemia transferred by	Agree	Disagree
1. Blood transfusion contacts	52.85%	47.14%
2. From parents to children	51.42%	48.57%

Table 4. Study for evaluation of views about sickle cell anemia hope

Sickle cell anemia may be treated by	Agree	Disagree
1. Medicines	58.57%	41.42%
2. Surgery	60%	40%
3. No need of treatment	42.85%	57.14%

4. Discussion

Present study estimated that majority of students are aware of the fact that it is a fungal disease rather than viral the percentage of students who said that it is a genetically transmitted are 41.4% and it is not an inherited disease. 50% of students are affected by this disease. Awareness about diseases gives a way to avoid diseases [3]-[5].

5. Conclusion

The female students residing in hostel of Bahauddin Zakariya University were not all aware about sickle cell anemia.

Declarations

Source of Funding

This research did not receive any grant from funding agencies in the public, commercial, or not-for-profit sectors.

Competing Interests Statement

The authors declare no competing financial, professional, or personal interests.

Ethical Approval

Ethical approval for this study was obtained from Institute of Molecular Biology and Biotechnology, Bahauddin Zakariya University, Multan, Pakistan.

Consent for publication

The authors declare that they consented to the publication of this research work.

Availability of data and material

The authors are willing to share the data and material according to relevant needs.

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